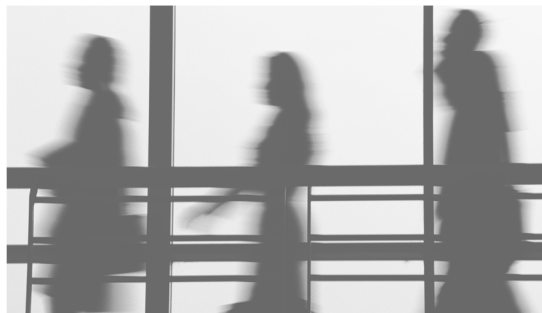
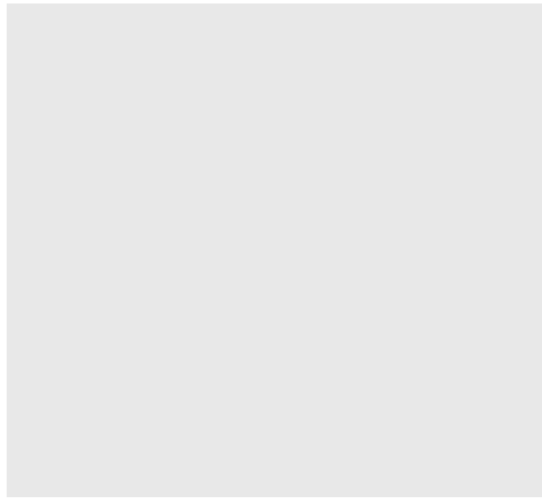
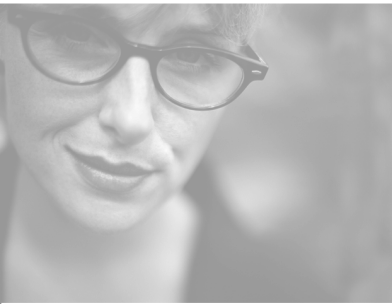


# Your Gateway Computer componentguide

Hard Drive Installation



Installing

Configuring

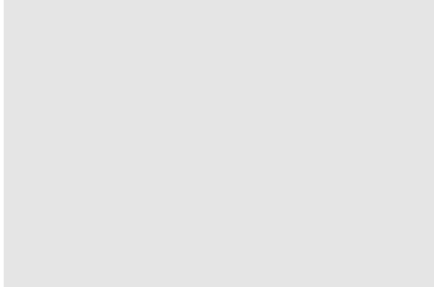




# Contents

<b>1</b>	<b>Preparing for Installation</b>	<b>1</b>
	Preventing static electricity discharge	4
<b>2</b>	<b>Removing an Existing Drive</b>	<b>5</b>
<b>3</b>	<b>Configuring the New Drive</b>	<b>9</b>
	Configuring the new IDE drive	10
	Setting the IDE jumpers	12
	Configuring the new SCSI drive	14
	Setting the SCSI jumpers	16
	Configuring the new Serial ATA drive	19
<b>4</b>	<b>Installing the New Drive</b>	<b>21</b>
	Installing the drive in your computer	22
	Installing the additional fan	26
	Connecting the drive cables	28
<b>5</b>	<b>Setting Up the New Drive Automatically</b>	<b>35</b>
	Setting up the hard drive	36
	Using the red Drivers CD	36
	Using the System Restoration Kit	38
	Using the System Restoration CD	39
<b>6</b>	<b>Setting up the New Drive Manually</b>	<b>41</b>
	Partitioning the new drive	41
	Determining which file system to use	42
	Creating a primary partition	43
	Creating the extended partition	46
	Creating an NTFS partition in Windows NT 4.0	47
	Creating an NTFS partition in Windows XP	48
	Formatting the New Drive	50
	Formatting a primary partition using DOS	50
	Formatting a partition or slave drive using Windows	52
<b>7</b>	<b>Troubleshooting</b>	<b>53</b>
<b>A</b>	<b>Safety, Regulatory, and Legal Information</b>	<b>55</b>





# Preparing for Installation

# 1

This guide provides the information you need to install a replacement or new hard drive. This guide covers SCSI and IDE hard drives.

Installing a hard drive is a process consisting of seven procedures that must be done in sequence:

- 1** Prepare for installation.
- 2** Remove an existing drive (if applicable).
- 3** Set the jumpers on the new drive (if applicable).
- 4** Install the new drive.
- 5** Set up the new drive.
- 6** Partition the new drive (manual setup).
- 7** Format the new drive (manual setup).



This guide also has a troubleshooting section that provides hard drive installation troubleshooting tips.

See the documentation that came with your computer for information about opening and closing your computer case.

**Important**



The illustrations in this document show a typical computer. They may not exactly match your configuration and may include options you did not purchase. However, they are similar enough to your computer that they should help you install your drive successfully.



**To prepare for installation:**

- 1** Find a place to install the new hardware that:
  - Is clean. (Avoid dusty areas.)
  - Is a low-static environment. (Avoid carpeted areas.)
  - Has a stable platform on which to set your computer.
  - Is near a telephone in case you need technical support assistance from Gateway Technical Support. The telephone must be directly connected to a telephone jack and cannot be connected to your computer.

## 2 Obtain these additional items:

- A Phillips screwdriver.
- A grounding wrist strap (available at most electronic stores).
- The red *Drivers* CD, *System Restoration Kit*, or *System Restoration* CD that came with your computer.
- A small container to hold hardware parts, such as screws, while you are working.
- The documentation that came with your computer.

### Important



If you do not have printed documentation, go to the Gateway Web site ([www.support.gateway.com](http://www.support.gateway.com)) and print the appropriate document before starting the installation procedure.

- 3 If you are replacing a working hard drive, back up any files that you want to save.
- 4 Determine which operating system your computer uses by right-clicking the **My Computer** icon (located on the Desktop or the Start menu), then clicking **Properties**. The name and version of your operating system are listed on the General tab of the *System Properties* dialog box. You will need this information to partition the hard drive.



# Preventing static electricity discharge

The components inside your computer are extremely sensitive to static electricity, also known as *electrostatic discharge* (ESD).

**Warning**



ESD can permanently damage electrostatic discharge sensitive components in your computer. Follow the ESD guidelines every time you open your computer case to prevent ESD damage.

**Warning**



To avoid exposure to dangerous electrical voltages and moving parts, turn off your computer and unplug the power cord and modem cable before opening the case.

Before opening your computer case, follow these guidelines:

- Turn off your computer power.
- Wear a grounding wrist strap (available at most electronics stores) and attach it to a bare metal part of your computer.

**Warning**



To prevent risk of electric shock, do not insert any object into the vent holes of the power supply.

- Touch a bare metal surface on the back of your computer.
- Unplug the power cord and modem cable.

Before working with computer components, follow these guidelines:

- Avoid static-causing surfaces such as carpeted floors, plastic, and packing foam.
- Remove components from their antistatic bags only when you are ready to use them. Do not lay components on the outside of antistatic bags because only the inside of the bags provide electrostatic protection.
- Always hold expansion cards by their edges or their metal mounting brackets. Avoid touching the edge connectors and components on the cards. Never slide expansion cards or components over any surface.

# Removing an Existing Drive

## 2

Follow this procedure only if you are replacing an existing hard drive. If you are adding a new hard drive, go to “Configuring the New Drive” on page 9.

### Warning



Avoid exposure to dangerous electrical voltages and moving parts by turning off your computer and unplugging the power cord and modem cable before opening the case.

### Tips & Tricks

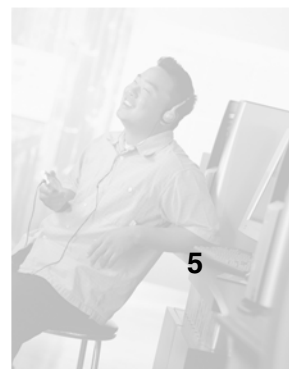


See the documentation that came with your computer for more information about your specific computer case.

### Tips & Tricks



If you are replacing a drive, make note of the jumper settings on the old drive so you can configure the new drive the same way.



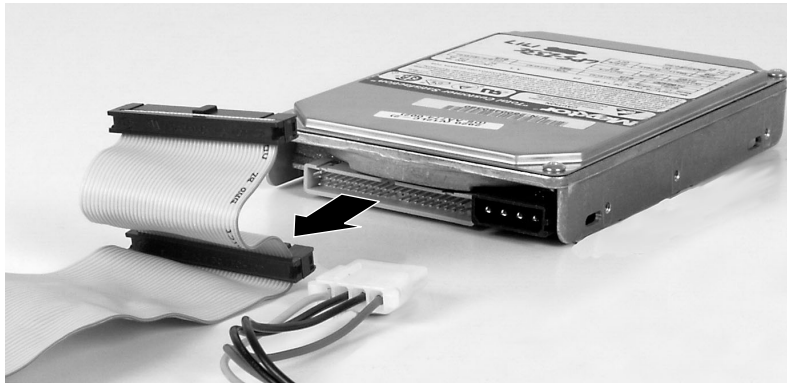


### To remove an existing drive:

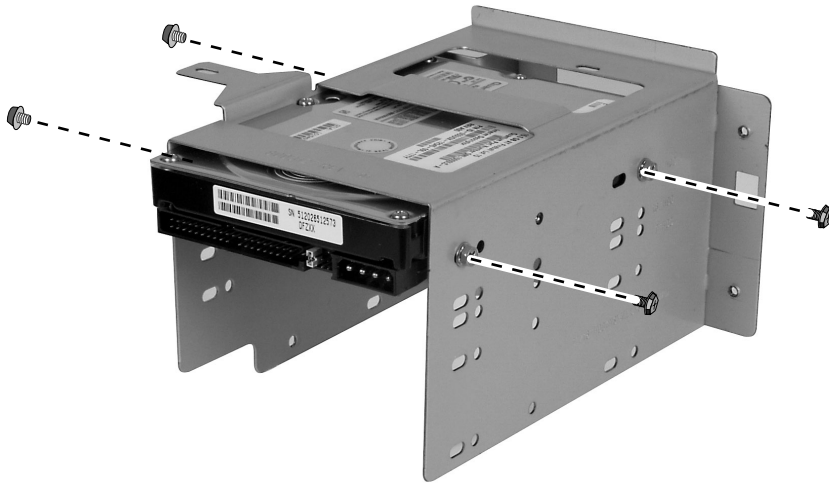
- 1 Turn off your computer, then disconnect the power cord and external cables.

See the documentation that came with your computer for instructions on removing your computer case cover.

- 2 Following the static electricity precautions on page 4, remove your computer case cover.s
- 3 Remove the data ribbon cable (IDE or SCSI drives) or signal cable (Serial ATA drive) and power cable from the back of the hard drive.



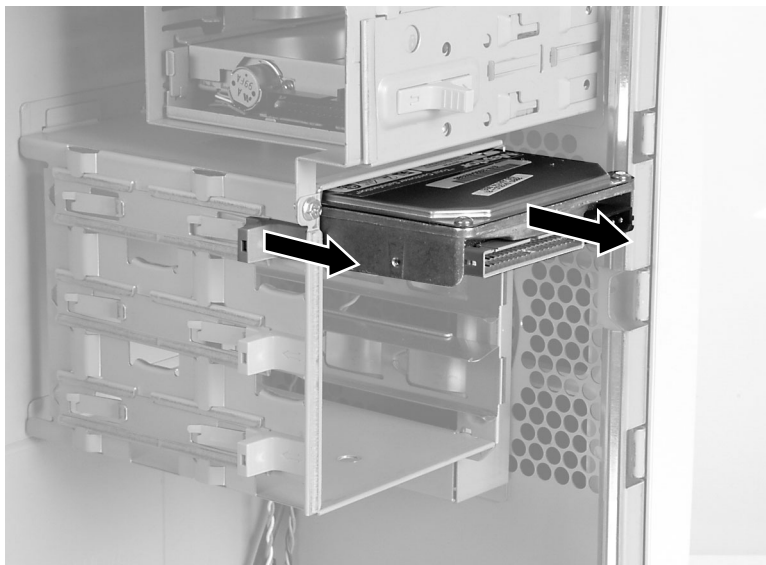
- 4 If the drive is mounted to a removable cage or brackets, remove the cage or brackets from your computer case, then remove the drive from the cage or brackets.



- OR -



If the drive is attached to a fixed cage, slide the release lever, then remove the drive.



- 5 If this drive is a replacement for a failed drive, carefully pack the failed drive and follow the instructions on the return form to send your drive back to Gateway for credit.

Go to “Configuring the New Drive” on page 9.



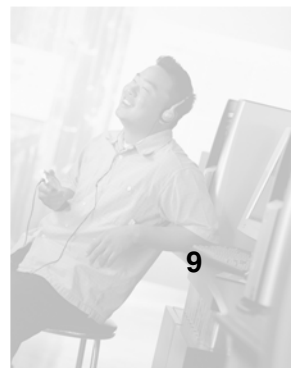


# Configuring the New Drive

# 3

Read this chapter to learn about:

- Cabling and configuring IDE drives for master or slave
- Cabling and configuring SCSI drives for ID and termination
- Cabling and configuring Serial ATA drives

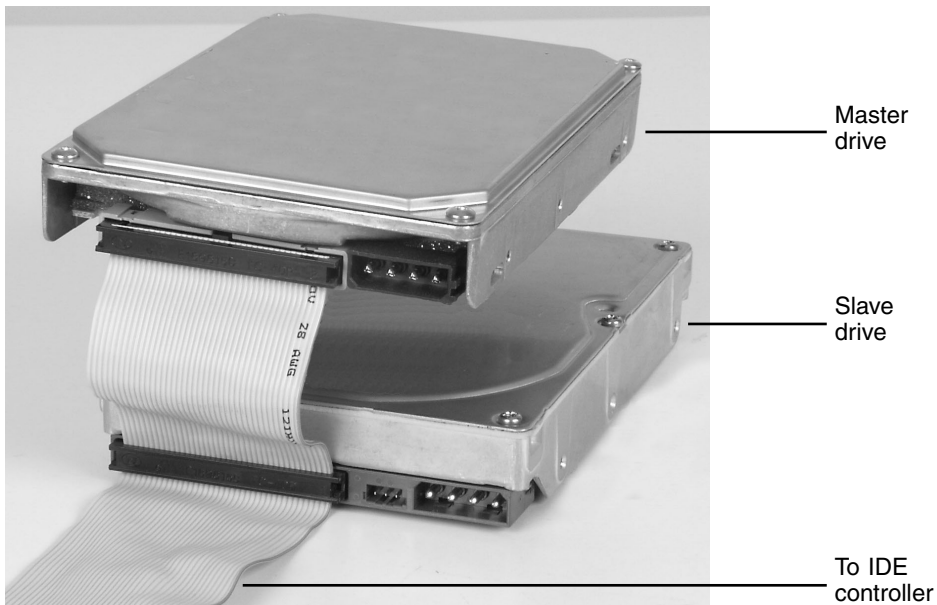


# Configuring the new IDE drive

If your new drive is a SCSI drive, go to “Configuring the new SCSI drive” on page 14.

If your new drive is a Serial ATA drive, go to “Configuring the new Serial ATA drive” on page 19.

Your system board may contain as many as three controllers (where the wide ribbon cables attach to the main system board or a host adapter add-in card). One controller is for the diskette drive. Two are for IDE drives. One of the IDE controllers is the primary controller and the other is the secondary controller. Each IDE controller can contain two devices, a *master* device and a *slave* device.



## Master drives

If the drive you are installing is on the end of the cable, it is the master drive. Master drives are typically *bootable*, which means they are used to *boot*, or start, your computer.

Your IDE drive should be configured as a master if it will be the only drive connected to the IDE interface cable or if there will be two drives connected to the cable and the other drive is configured as a slave.

### Important



If you have only one drive, it must be connected to the end connector on the IDE cable.

## Slave drives

If the drive you are installing is in the middle of the cable, it is the slave drive. Slave drives are typically used for storing files and installing programs. You cannot start your computer from the slave drive.

A slave drive is the secondary drive on either the primary or secondary IDE controller. Configure your IDE drive as a slave drive if the drive will be one of two drives connected to the IDE interface cable and the other drive is configured as a master drive.

### Important



If you are adding a drive and making it the master (boot) drive, the existing drive must be reconfigured as a slave drive.

If there is already one drive connected to the cable before the new IDE drive is installed, it is probably configured as a master. However, some IDE drives require a different master or slave setting when two drives are connected. If you have any problems, see the documentation that came with the existing IDE drive for additional master or slave configuration information.

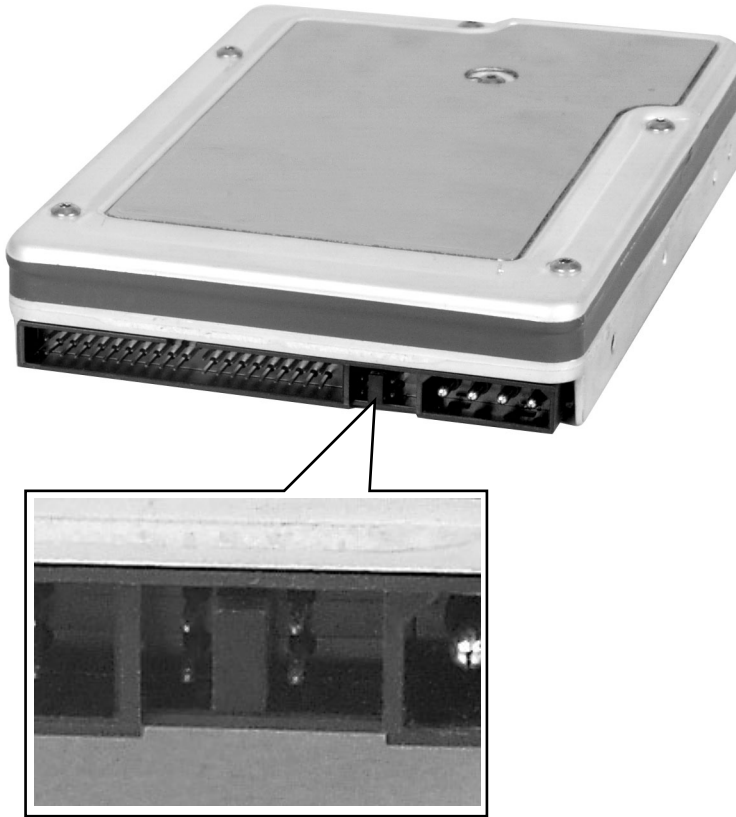
## Cable select

Cable select is a jumper setting that configures the drive as a master or slave drive based on its position on the IDE cable. If both drives on the IDE data cable are configured as cable select, the middle drive is the slave and the end drive is the master.

The drive *and* the IDE data cable must support cable select to use this option.

## Setting the IDE jumpers

IDE drives contain a *jumper block*. A jumper block is a set of pins located on the drive. The jumper block is typically located on the rear of the drive, although it may be located on the top or the bottom of the drive.



On some IDE drives, a jumper is placed over two of the pins to configure the drive as the master (or single) drive or as the slave drive. IDE drives are labeled with information about which set of pins must be used to make the drive a master or slave.

Other IDE drives use the *cable select* setting to configure the drive. Cable select is a jumper setting that configures the drive as a master or slave drive based on its position on the IDE cable. If both drives on the IDE data cable are configured as cable select, the middle drive is the slave and the end drive is the master. The drive *and* the IDE data cable must support cable select.

Usually, if you are installing the new drive as a replacement drive, configure the new drive settings so they match your old drive settings. If your old drive was set as a master drive, set the new drive as a master drive.

However, in order to maintain the same configuration (master, slave, or cable select), your new drive may require different jumper settings than your current drive. Check the label on your drive for the correct settings.



### To set the jumpers for an IDE drive:

- 1 Find the jumpers for setting a master, a slave, or a cable select drive by looking at the jumper label. The label is either a sticker on the drive, or it is printed directly on the drive.
- 2 If both of the drives *and* the IDE data cable support cable select, set the jumpers for the drives as cable select. IDE data cables that support cable select should be labeled **CS**. Cable select makes the drive in the middle of the cable the slave and the drive at the end of the cable the master. Go to “Installing the New Drive” on page 21.

- OR -

If either the drives *or* the IDE data cable do not support cable select, go to the next step.

- 3 If the drive is in the middle of the IDE data cable and you are going to configure your drive as the slave drive, set the jumpers as Slave A. If Slave A is not an option, set the jumpers as Slave. Go to “Installing the New Drive” on page 21.

- OR -

If the drive is at the end of the IDE data cable and you are going to configure your drive as the master drive, set the jumpers as Master A. If Master A is not an option, set the jumpers as Master. Go to “Installing the New Drive” on page 21.



# Configuring the new SCSI drive

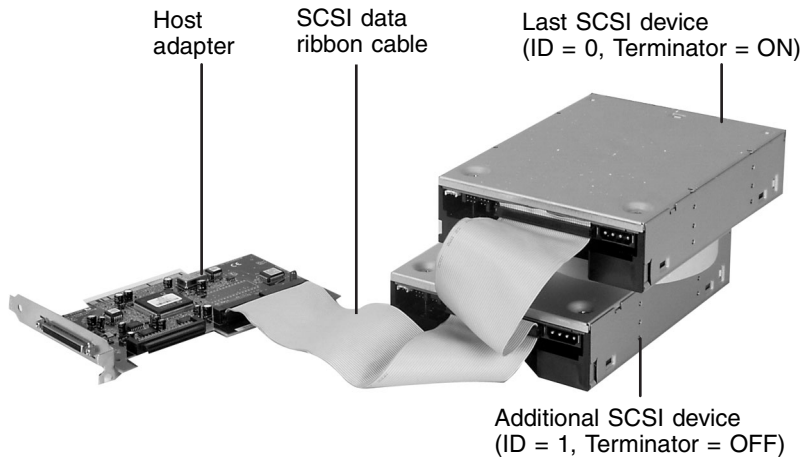
If your new drive is an IDE drive, go to “Configuring the new IDE drive” on page 10.

If your new drive is a Serial ATA drive, go to “Configuring the new Serial ATA drive” on page 19.

If your computer contains SCSI devices, they are connected to a SCSI host adapter add-in card.

All devices on a SCSI data ribbon cable connect to form a chain. This chain contains a SCSI host adapter and your other SCSI devices such as the hard drive and tape backup unit.

To configure SCSI devices correctly on the SCSI chain, you must designate (terminate) the ends of the chain and determine the order of the links (IDs) between the ends of the SCSI chain.



## Termination

Each device on the SCSI cable is either at an end of the chain or at a link in the middle. A SCSI device has a terminator jumper which can be set to On (for a device at the end of the chain) or Off (for devices in the middle of the chain).

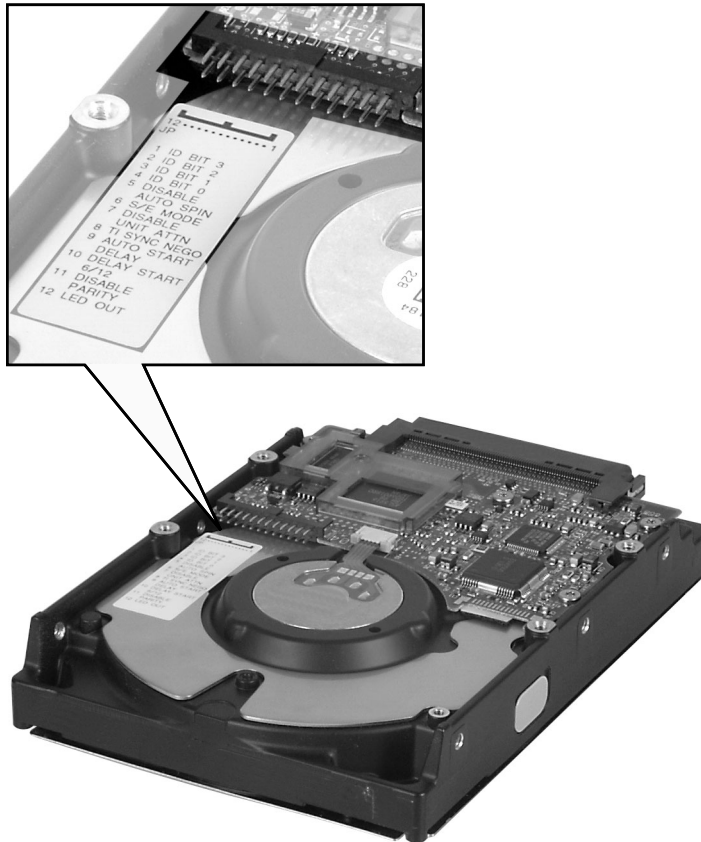
Generally, your computer's SCSI host adapter is at one end of the chain and a terminated device is at the other. All other devices are middle links. The SCSI host adapter can be set so you can start up from any device on the SCSI chain.

## SCSI IDs

In addition to recognizing the ends of the SCSI chain, your computer needs to designate the order of the links. For this reason, each device on the SCSI chain requires a unique device ID. This ID can be any number between 0 and 15 (for Ultra Wide SCSI) **other than 7**, which is the factory preset for the host adapter. The ID number, or *address*, is set on most SCSI devices by adjusting jumpers on pins.

## Setting the SCSI jumpers

SCSI drives contain a *jumper block*. A jumper block is a set of pins located on the drive. The jumper block is typically located on the rear of the drive, although it may be located on the top or the bottom of the drive.



On SCSI drives, a jumper is placed over two of the pins to configure the SCSI drive's termination setting. Other jumpers are placed over additional sets of pins to configure the ID setting.



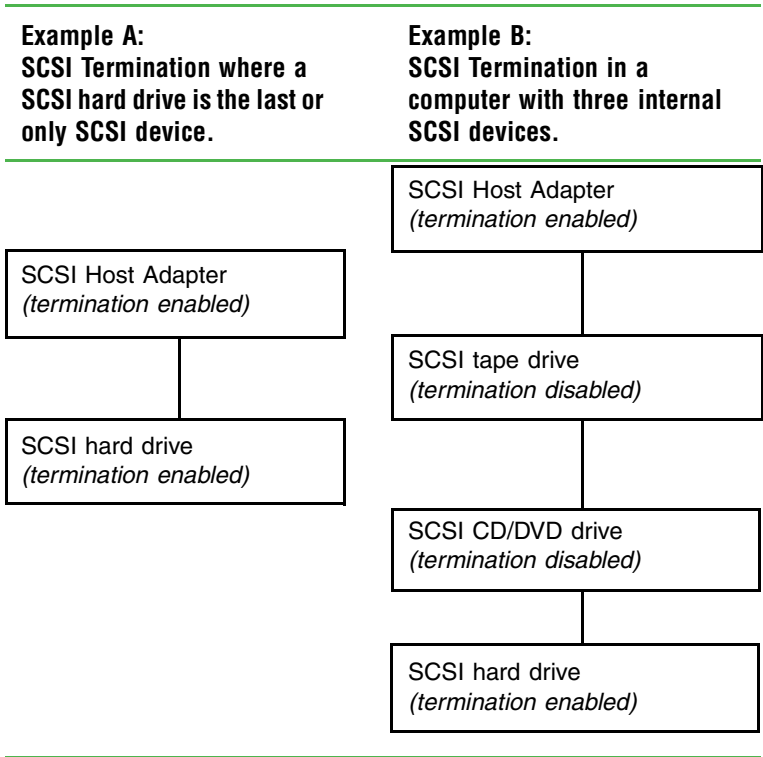
**To set the jumpers for a SCSI drive:**

**1** Find the jumpers for setting the SCSI drive's termination and ID by looking at the jumper label. The label is either a sticker on the drive, or it is printed directly on the drive.

**2** Set the SCSI drive's ID number.

Check the SCSI ID numbers used by the other SCSI devices on the SCSI chain (SCSI ID numbers are identified on-screen during computer start up), then set the drive's SCSI ID to a number that is not being used by another SCSI device.

**3** Check SCSI termination.



If your drive will be the last device on the SCSI cable or the only device on the cable, as shown in Example A, make sure that a jumper is installed on the SCSI termination jumper pins.

- OR -

If your drive will be in the middle of a SCSI chain, as shown in Example B, remove the termination jumper. Make sure that the last SCSI device on the cable has termination enabled.

- 4 Go to “Installing the New Drive” on page 21.



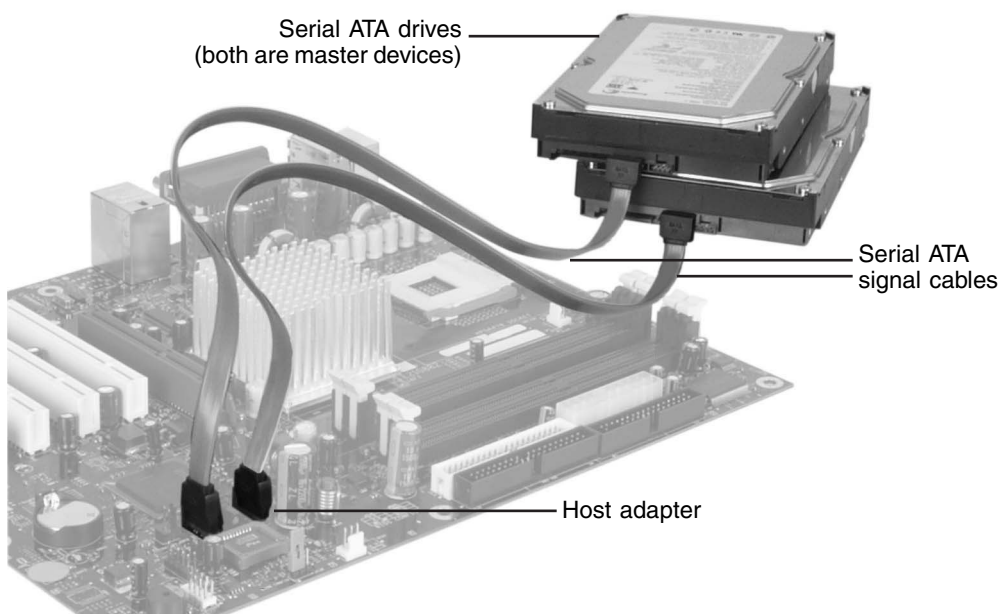
# Configuring the new Serial ATA drive

If your new drive is an IDE drive, go to “Configuring the new IDE drive” on page 10.

If your new drive is a SCSI drive, go to “Configuring the new SCSI drive” on page 14.

Each Serial ATA drive connects in a point-to-point configuration to the Serial ATA host adapter. The Serial ATA host adapter is usually located on the system board or it may be a separate add-in card. There is no master/slave relationship because each drive is considered a master in a point-to-point relationship. If two drives are attached on one Serial ATA host adapter, the host operating system views the two devices as if they were both “masters” on two separate ports. This means both drives behave as if they are Device 0 (master) devices. When your computer is turned on, the drive with the operating system installed starts (boots) your computer.

Serial ATA drives are designed for easy installation with no jumpers, terminators, or other settings. The jumper block adjacent to the signal connector is for factory use only.





# Installing the New Drive

# 4

This chapter consists of three procedures that must be done in sequence.

- 1 Install the new drive in your computer.
- 2 Install the additional fan in your computer.  
(new SCSI drive only)
- 3 Connect the cables to the new drive.

## Important

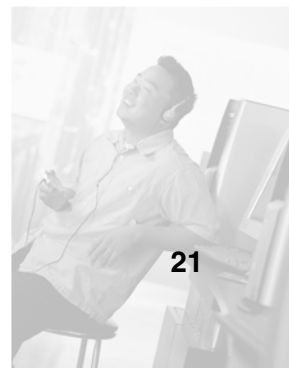


The illustrations in this document show a typical computer. They may not exactly match your configuration and may include options you did not purchase. However, they are similar enough to your computer that they should help you install your drive successfully.

## Tips & Tricks



See the documentation that came with your computer for more information about your specific computer case.



# Installing the drive in your computer

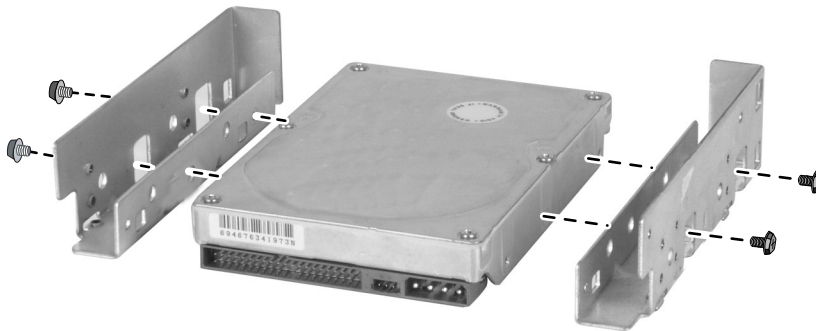


## To install the drive into your computer:

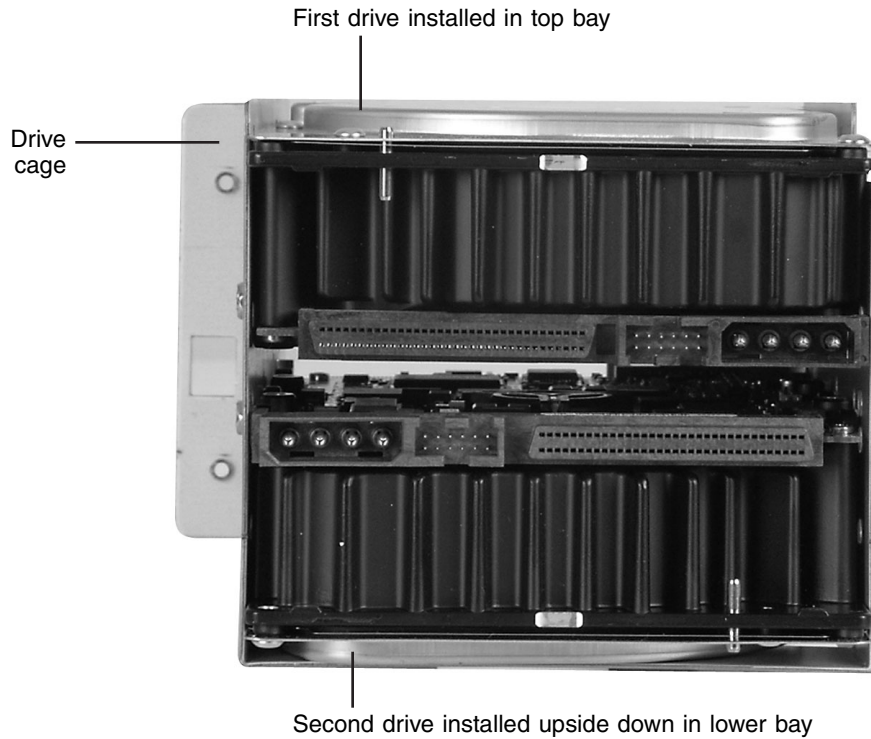
- 1 Turn off your computer, then disconnect the power cord and external cables.
- 2 Following the static electricity precautions on page 4, remove your computer case cover.

See the documentation that came with your computer for instructions on removing your computer case cover.

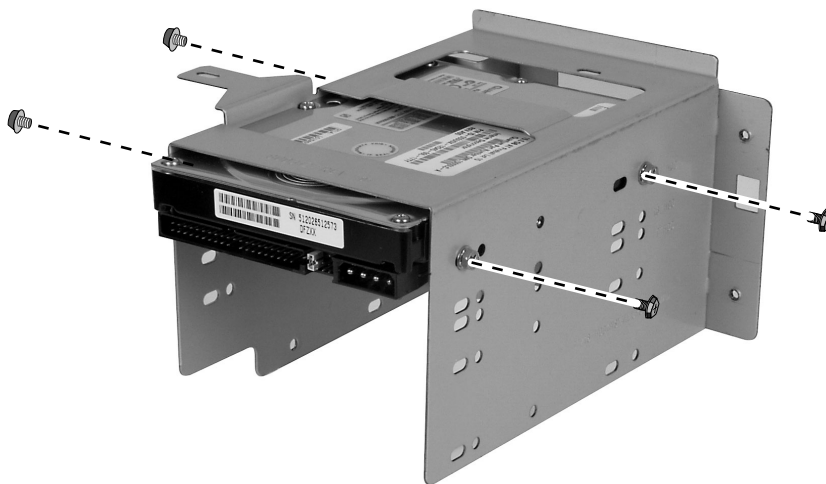
- 3 If you are installing the drive in a 5.25-inch drive bay, attach the hard drive expansion brackets to the sides of the drive.



- 4** If you are adding a half-height SCSI hard drive to a computer that already has a half-height SCSI hard drive installed in it, install the second drive into the drive cage upside down.

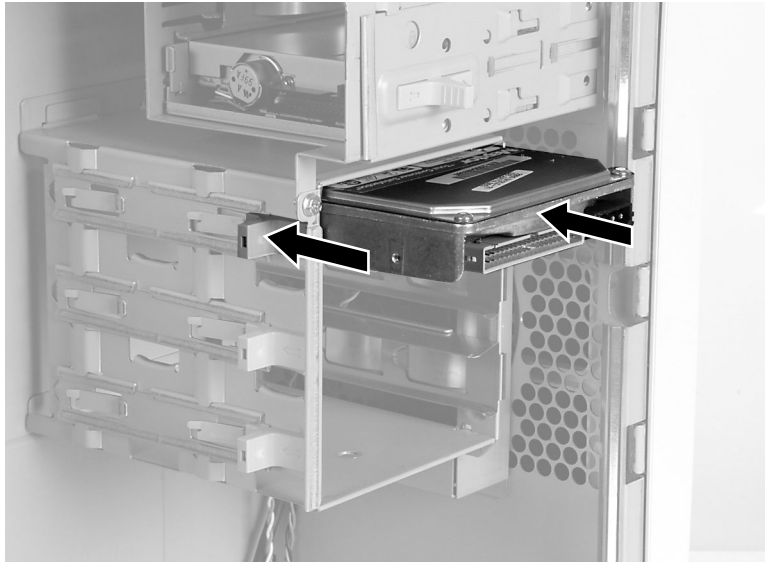


- 5** If you are installing the new drive in a removable cage or brackets, remove the cage or brackets (if you have not already do so). Install the new drive in the cage or brackets, then attach the cage or brackets to the inside of your computer case with the screws removed earlier. Make sure that the drive is positioned so you can connect the cables to the connectors on the back of the drive. For more information, see “Connecting the drive cables” on page 28.



- OR -

If the drive was attached to a fixed cage, make sure that the release lever is in the unlocked position, install the drive, then slide the release lever to the locked position. Make sure that the drive is positioned so you can connect the cables to the connectors on the back of the drive. For more information, see “Connecting the drive cables” on page 28.



**6** Go to “Installing the additional fan” on page 26.



# Installing the additional fan

If you are adding a drive that is not a half-height SCSI hard drive, or if you are replacing a hard drive, go to “To connect the drive cables:” on page 28.

You only need to perform this procedure if you are installing a new half-height SCSI hard drive into a tower case.



## To install the additional fan into a tower case:

- 1 Install the fan that came with your new half-height SCSI hard drive into the tower case using the screws that came with the fan.



- 2** Attach one end of the fan power cable adapter to the fan power cable connector.



- 3** Attach the other end of the fan power cable adapter to an available four-color power cable connector.

If you do not have enough power connectors, place the Y-adapter power cable that came with the new drive on the end of the existing power cable to make two power connectors.

- 4** Go to “Connecting the drive cables” on page 28.



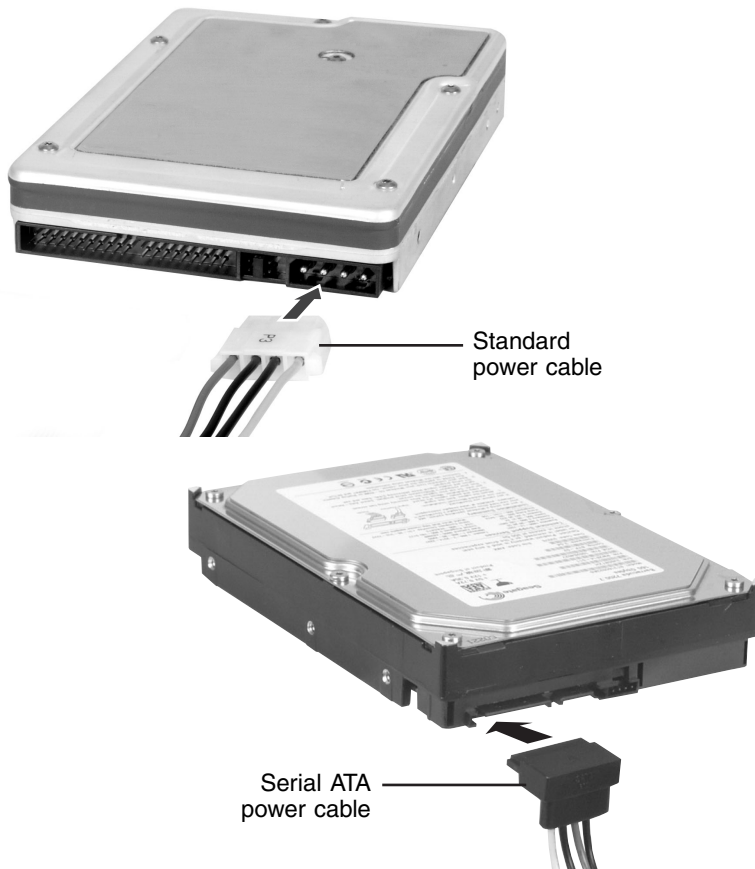
# Connecting the drive cables



## To connect the drive cables:

- 1 Connect an unused four-color power cable to the power supply connector on each drive. The power supply connector varies between drive types.

If the drive uses a Serial ATA power cable, you may need to connect the standard power cable to the end of the Serial ATA cable to complete the power connection.



If you do not have enough power connectors, place the Y-adapter power cable that came with the new drive on the end of the existing power cable to make two power connectors.

**2** Connect the data ribbon cable or signal cable to the back of the drive.

**Warning**



If you are connecting a data ribbon cable, make sure that you align the red-striped edge of the cable toward the Pin 1 end of the data cable connector. Usually, this is the end of the connector that is nearest the power supply connector. PIN 1 is usually labeled with a small arrow, the number "1," or a low number (for example, "2"). Be careful not to force the cable connector or bend any of the pins.

- OR -

If you are connecting a signal cable, the signal cable is keyed to align correctly with the signal connector on the back of the drive.



- OR -



If you are connecting two IDE drives to the cable, connect the middle cable connector to the slave drive and connect the end cable connector to the master (boot) drive.



- OR -

If you are connecting two Serial ATA drives, connect a signal cable to each of the drive signal connectors.

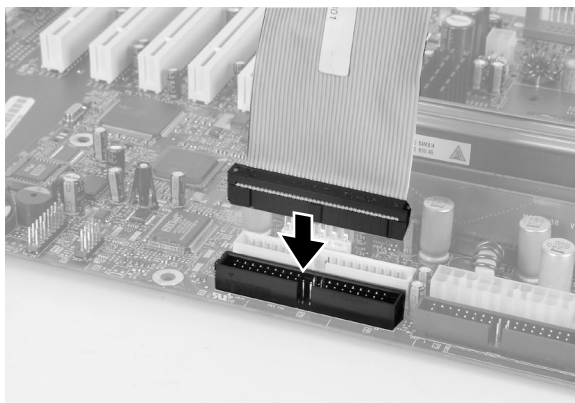


- 3 Follow the data ribbon cable from the connector on the drive to the other end of the cable. Make sure that it is connected securely to the **primary controller** connector.

**Tips & Tricks**



If you are not sure which connector is the primary controller connector, look for a label like **PRI IDE**, **HDD1**, or **IDE1** on the system board.



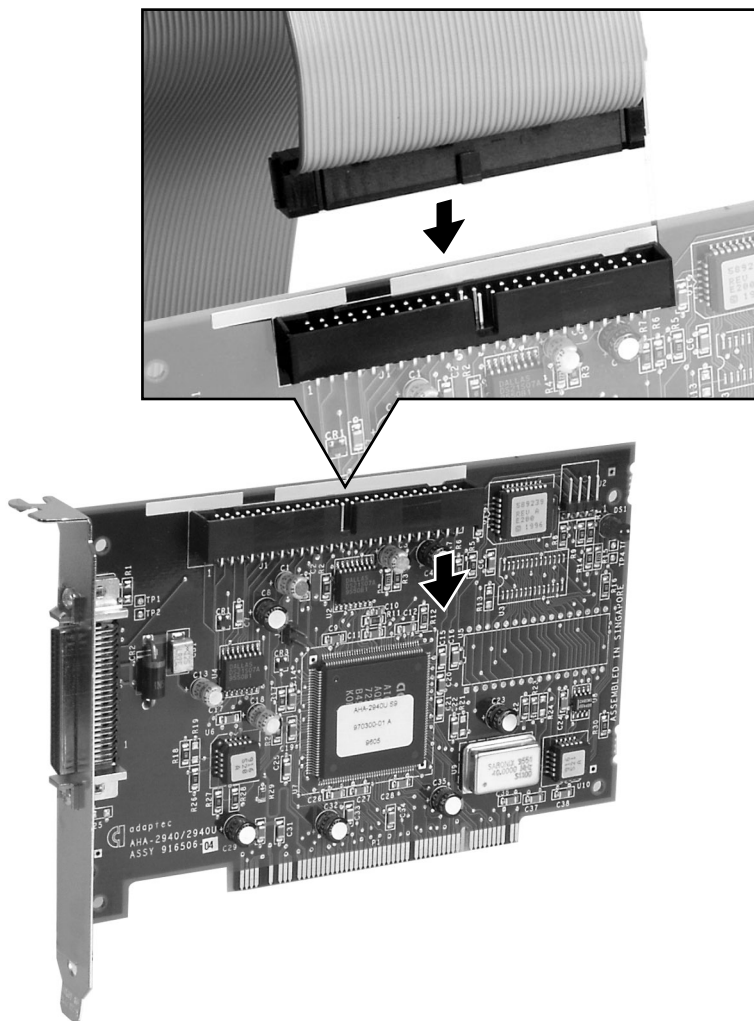
- OR -

If you have an IDE controller card, connect the data ribbon cable to the primary controller connector on the IDE controller card.

- OR -



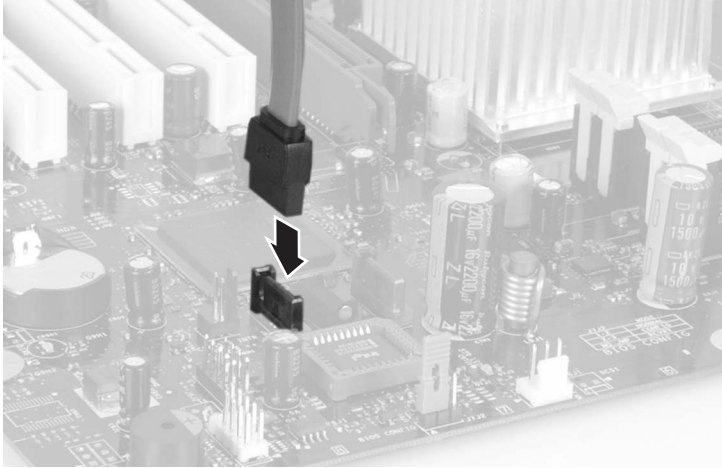
If you are installing a SCSI drive, connect the data ribbon cable to the corresponding connector on the SCSI adapter card.



If you have not installed the SCSI adapter card in your computer, see the documentation that came with the SCSI adapter card for installation instructions.

- OR -

If you are installing a Serial ATA drive, connect the signal cable to one of the host adapter connectors on the system board. The Serial ATA drive does not use the master/slave configuration, so connect the signal cable to either Serial ATA host adapter.



- 4 Go to “To complete drive installation:” on page 33.



#### To complete drive installation:

- 1 Replace your computer case cover.

See the documentation that came with your computer for instructions on replacing your computer case cover.

- 2 Reconnect the external cables, then plug in the power cord.

- 3 Turn on your computer.

- 4 If you replaced the master (boot) drive and the Windows® desktop appears after restarting your computer, the hard drive installation procedure is complete. Go to the next step.

- OR -



If you replaced a master (boot) drive and do not see the Windows desktop, or you replaced or added an additional slave drive, go to “Setting Up the New Drive Automatically” on page 35.

- 5 Right-click the **My Computer** icon (located on the Desktop or the Start menu), then click **Properties**. The *System Properties* dialog box opens.
- 6 In Windows XP or Windows 2000, click the **Hardware** tab, then click **Device Manager**. The *Device Manager* window opens.

- OR -

In Windows Me or Windows 98, click the **Device Manager** tab. The *Device Manager* window opens.

- 7 Check for a yellow circle with an exclamation point next to any of your computer's devices. If there are none, you are finished. If you want to create a customized partition, go to “Partitioning the new drive” on page 41.

- OR -

If you find any yellow circles, use the red *Drivers* CD, the *Gateway System Restoration Kit*, or the *Gateway System Restoration CD* that originally came with your computer to reinstall the drivers.

#### Tips & Tricks



If you do not have your original system CDs, go to [www.support.gateway.com](http://www.support.gateway.com) to download any drivers you need.



If your computer does not recognize the new hard drive or if the new hard drive does not seem to be working correctly, go to “Troubleshooting” on page 53.

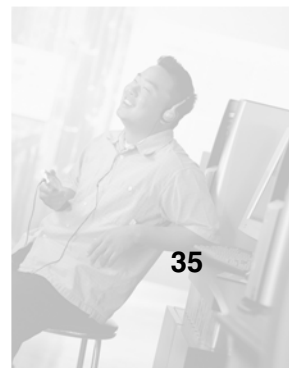


# Setting Up the New Drive Automatically

# 5

If you replaced a master (boot) drive and you do not see the Windows desktop when you start your computer, go to “Setting up the hard drive” on page 36.

If you replaced or added an additional slave drive, go to “Setting up the New Drive Manually” on page 41.



# Setting up the hard drive

The red *Drivers* CD, the *Gateway System Restoration Kit*, or the *Gateway System Restoration CD* that originally came with your computer contains a program that will automatically set up an empty hard drive. The program will partition and format the drive, then install Windows for you. If you are using:

- The red *Drivers* CD, go to “Using the red Drivers CD” on page 36.
- The *System Restoration Kit*, go to “Using the System Restoration Kit” on page 38.
- The *System Restoration CD*, go to “Using the System Restoration CD” on page 39.

## Tips & Tricks



If you do not have your original system CDs, go to [www.support.gateway.com](http://www.support.gateway.com) to download any drivers you need.

## Using the red Drivers CD



### To set up a hard drive automatically using the red *Drivers* CD:

- 1** Insert the red *Drivers* into the CD or DVD drive.
- 2** Restart your computer.
- 3** Select **2. Boot from CD-ROM.**
- 4** Select a language option.
- 5** Select **1. Delete all files (Automated Fdisk/Format).**
- 6** Select **1. Continue deleting all files and restart.**
- 7** When prompted, press any key to continue.
- 8** Select **2. Boot from CD-ROM.**
- 9** Select a language option.
- 10** Select **2. Automated installation of Windows (XP or 2000).**

- 11** If an Advanced Menu option appears:  
  
Select **1. Normal installation of Windows (XP or 2000)**. This is the most commonly selected option.  
  
- OR -  
  
Select **2. Installation of Windows w/ special HDD controllers**. If your computer includes a hard drive that requires a special hard drive driver, for example, a Serial ATA drive, then select this option.
- 12** When prompted, remove the red *Drivers* CD and insert the blue *Operating System* CD into the CD or DVD drive, then press any key to continue.
- 13** When prompted, press Y to accept the *License Agreement*.
- 14** Wait while the setup program copies files to the hard drive. **When your computer restarts, do NOT press any key to boot from CD.**
- 15** When prompted, insert the red *Drivers* CD, then click **Continue**.
- 16** When prompted, insert the yellow *Applications* CD(s), then click **Continue**. The Gateway Application Loader automatically installs your drivers and programs. Your computer restarts several times during this process. Do **not** press any keys or buttons during this process unless prompted to do so.
- 17** When the Gateway Application Loader has finished, click **OK** to go to the Windows desktop.



## Using the System Restoration Kit

If you want to customize the hard drive's configuration, do not set up the hard drive automatically. Instead, go to "Partitioning the new drive" on page 41 and "Formatting the New Drive" on page 50.



### To set up a hard drive automatically using the *System Restoration Kit*:

- 1** Insert *Disc 2* of the *System Restoration Kit* into your CD or DVD drive.
- 2** Restart your computer.
- 3** Select **2. Install Windows**. The Gateway System Restoration Startup Menu opens.
- 4** If a message tells you that you must disable Gateway GoBack, press **D**. A warning tells you that Gateway GoBack will be disabled. Press **D** again. Gateway GoBack is disabled and your computer restarts.
- 5** Follow the on-screen instructions. The on-screen instructions step you through the operating system and device drivers installation.



## Using the System Restoration CD

If you want to customize the hard drive's configuration, do not set up the hard drive automatically. Go to "Partitioning the new drive" on page 41 and "Formatting the New Drive" on page 50.



### To set up a hard drive automatically using the *System Restoration CD*:

- 1** Insert the *Gateway System Restoration CD* into your CD or DVD drive.
- 2** Restart your computer. The Gateway System Restoration CD Boot Menu opens.
- 3** Select **2. Boot from CD-ROM**, then press ENTER.
- 4** If the restore utility detects that the hard drive does not have a partition, the Partitioning Options screen opens. Go to the next step.

- OR -

If the Partitioning Options screen does not open, the hard drive already has a partition, go to Step 7.

- 5** If you have a Windows Me or Windows 98 *Gateway System Restoration CD*, or if you have a Windows 95 *Gateway System Restoration CD* **and** your Windows 95 *Gateway System Restoration CD* is labeled "Windows 95 with USB," then select **Partition using FAT32 (not for use with Windows 95 or NT 4.0)**.

- OR -

If you have a Windows 95 *Gateway System Restoration CD* that does **not** say "Windows 95 with USB", then select **Partition using FAT16**.

- 6** When your computer restarts, select **2. Boot from CD-ROM** from the Gateway System Restoration CD Boot Menu. The Main Menu opens.
- 7** Select **Install Windows Me**, **Install Windows 98**, or **Install Windows 95** (depending on which CD you have), then press ENTER.
- 8** Following the on-screen instructions to install the operating system.







# Setting up the New Drive Manually

# 6

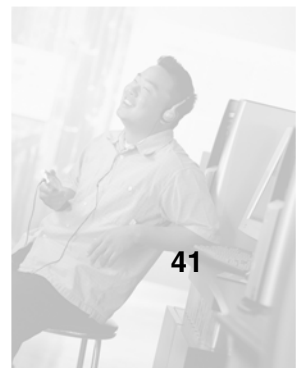
## Partitioning the new drive

Follow the instructions in this chapter only if you want to manually customize the partitions on your new hard drive.

If you are not sure which operating system your computer uses, right-click the **My Computer** icon (located on the Desktop or the Start menu), then click **Properties**. The name and version of your operating system are listed on the General tab of the *System Properties* dialog box.

Complete these three procedures, in sequence, to partition the hard drive:

- 1 Determine which file system to use.
- 2 Create a primary partition.
- 3 Create the extended partition.



## Determining which file system to use

There are three types of file systems used to manage data on the hard drive:

- **File Allocation Table (FAT)16** lets your computer address 2.1 GB of drive space per partition.
- **FAT32** lets your computer address up to 1 TB (1 terabyte) of drive space per partition.
- **NT File System (NTFS)** lets your computer address all of the drive space as one partition.

Select the operating system and the file system to use:

Operating system	File system used
Windows 95	FAT16
Windows 95 with USB (OSR2)	FAT32
Windows 98 and Windows 98 Second Edition	FAT32
Windows Me	FAT32
Windows NT 4.0*	FAT16 (primary); NTFS (extended)
Windows 2000**	FAT32 (primary); NTFS (extended)
Windows XP	NTFS

\* If you are creating a boot drive and your operating system is Windows NT 4.0, we recommend that you use FAT16 to partition the primary partition (up to 2 GB) of the drive and use NTFS to create the extended partition.

\*\* If you are creating a boot drive and your operating system is Windows 2000, we recommend that you use FAT32 to partition the primary partition (up to 4 GB) of the drive and use NTFS to create the extended partition.

## Creating a primary partition

A *primary* DOS partition contains the essential system files required to start up your computer. To load these system files on the hard drive, you have to use the FDISK program to create a primary DOS partition and make the partition active.

### Important



The FDISK program is not available in Windows XP. A primary partition is created when Windows XP is installed on the hard drive. During the Windows XP installation process, you can also select the size and type of other partitions. If you leave any part of the hard drive unpartitioned, you can create the extended partition and assign logical drives by following the procedures “To create an extended partition using Windows XP NTFS:” on page 48 and “To create a logical drive using Windows XP NTFS:” on page 49. We recommend that you use NTFS for all partitions.



### To create a primary partition with FAT16:

- 1** Insert the *System Restoration Kit CD* or *System Restoration CD* into your CD or DVD drive.
- 2** Restart your computer. The Main menu opens.
- 3** Close the Main menu.
- 4** Type **fdisk**, then press ENTER.
- 5** Type N. Large disk support is disabled.
- 6** If you have only one hard drive in your computer, go to Step 8.

- OR -

If you have more than one hard drive in your computer type 5, then press ENTER. The **Change Current Fixed Disk Drive** menu opens showing drive availability and status.



**7** If the new hard drive is a master (boot) drive, type 1 for the **Fixed hard drive Number**.

- OR -

If the new hard drive is a slave drive, type 2 for the **Fixed hard drive Number**.

**8** Press ENTER. The **FDISK Options** menu appears with the appropriate drive selected as the current fixed drive.

**9** Type 1, then press ENTER. The **Create Dos Partition** or **Logical DOS Drive** menu opens.

**10** Type 1, then press ENTER. The **Create Primary DOS Partition** screen appears and your computer verifies the drive integrity.

**11** Type Y, then press ENTER. The message **Primary DOS Partition created, drive letters changed or added** appears.

**12** Press ESC.

**13** Go to “Creating the extended partition” on page 46.



### To partition your drive with FAT32:

**1** Insert the *System Restoration Kit CD* or *System Restoration CD* into your CD or DVD drive.

**2** Restart your computer. The Main menu opens.

**3** Close the Main menu.

**4** Type **fdisk**, then press ENTER.

**5** Type Y. Large disk support is enabled.

**6** If you have only one hard drive in your computer, go to Step 8.

- OR -

If you have more than one hard drive in your computer type 5, then press ENTER. The **Change Current Fixed Disk Drive** window appears showing drive availability and status.

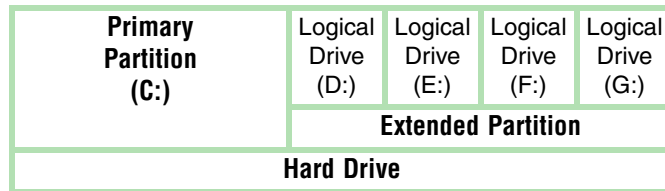
- 7** If the new drive is a master (boot) drive, type 1 for the **Fixed hard drive Number**.  
- OR -  
If the new drive is a slave drive, type 2 for the **Fixed hard drive Number**.
- 8** Press ENTER. The **FDISK Options** menu appears with the appropriate drive selected as the current fixed disk drive.
- 9** Type 1, then press ENTER. The **Create DOS Partition** or **Logical DOS Drive** menu opens.
- 10** Type 1, then press ENTER. The **Create Primary DOS Partition** screen appears and your computer verifies the drive integrity.
- 11** Type Y, then press ENTER. The message **Primary DOS Partition created, drive letters changed or added** appears.
- 12** Press ESC. The **FDISK Options** menu opens.
- 13** Press ESC. FDISK closes.
- 14** If you want to create an extended DOS partition, go to “Creating the extended partition” on page 46.  
- OR -  
If you do not want to create an extended DOS partition, go to “Formatting the New Drive” on page 50.



## Creating the extended partition

The *extended* DOS partition is a portion of a hard drive where non-system files can be stored. Your computer does not require an extended partition to function. The hard drive can have four primary partitions or three primary partitions and one extended partition.

A *logical drive* is an area of the extended DOS partition that you can set up to group directories and files. You **must** set up an extended DOS partition before you can create a logical drive. You can create as many as 23 logical drives in an extended DOS partition.



Because FAT32 lets your computer address up to 1 TB of drive space per partition and NTFS lets your computer address all of the drive space as one partition, you only need to make an extended partition when:

- You choose to create more than one partition
- The primary partition is created with another file system (Windows NT 4.0 users)

### Important



The FDISK program is not available in Windows XP. A primary partition is created when Windows XP is installed on the hard drive. During the Windows XP installation process, you can also select the size and type of other partitions. If you leave any part of the hard drive unpartitioned, you can create the extended partition and assign logical drives by following the procedures “To create an extended partition using Windows XP NTFS:” on page 48 and “To create a logical drive using Windows XP NTFS:” on page 49. Although Windows XP can use FAT16 and FAT32 partitions, we recommend that you use NTFS for all partitions.



### To create an extended partition using FAT16 or FAT32:

- 1 In the FDISK program, type 1, then press ENTER. **Create DOS Partition or Logical DOS Drive** is selected.
- 2 Type 2, then press ENTER. The **Create Extended DOS Partition** screen appears and your computer verifies the drive integrity. After the message **The Extended DOS Partition is created** appears, the total size of the partition appears.
- 3 Press ENTER.
- 4 Press ESC, then press ENTER. The partition is assigned a letter.
- 5 Press ENTER repeatedly until a message tells you that all available drive space has been partitioned.
- 6 Press ESC. The **FDISK Options** menu opens.
- 7 Press ESC. FDISK closes.
- 8 Go to “Formatting the New Drive” on page 50.



## Creating an NTFS partition in Windows NT 4.0

If you replaced a failed drive and have Windows NT 4.0 on your computer, Gateway has formatted the primary partition (2.1 GB) of the new hard drive using FAT16. You can convert the FAT16 partition to NTFS without losing the file information on the drive.

You cannot convert a NTFS partition to FAT16 without reformatting the entire drive and losing the file information on the drive.



### To create an extended partition using Windows NT NTFS:

- 1 Click **Start, Programs, Administrative Tools**, then click **Disk Administrator**.
- 2 Select the drive you want to partition.
- 3 Partition the drive.
- 4 Go to “Formatting the New Drive” on page 50.



## Creating an NTFS partition in Windows XP

If you replaced a hard drive and have Windows XP on your computer, it is not necessary to partition a hard drive that is running NTFS. However, you may want to create an extended partition so logical drives can be assigned.



### To create an extended partition using Windows XP NTFS:

- 1** Click **Start**, then click **Control Panel**. The *Control Panel* window opens. If your Control Panel is in Category View, click **Performance and Maintenance**.
- 2** Click/Double-click **Administrative Tools**.
- 3** Double-click **Computer Management**. The *Computer Management* window opens.
- 4** Double-click **Disk Management**.
- 5** Right-click the shaded, unallocated space box.
- 6** Click **New Partition**.
- 7** Complete the New Partition Wizard. Select Extended Partition when prompted for a partition type.
- 8** Go to “Formatting the New Drive” on page 50.





### To create a logical drive using Windows XP NTFS:

- 1** Click **Start**, then click **Control Panel**. The *Control Panel* window opens. If your Control Panel is in Category View, click **Performance and Maintenance**.
- 2** Click/Double-click **Administrative Tools**.
- 3** Double-click **Computer Management**. The *Computer Management* window opens.
- 4** Double-click **Disk Management**.
- 5** Right-click free space (available hard drive space) on an extended partition, then click **New Logical Drive**.
- 6** Follow the on-screen instructions to complete the New Partition Wizard. When prompted for a partition type, click **Logical drive**.
- 7** Go to “Formatting the New Drive” on page 50.



# Formatting the New Drive

If you replaced your master (boot) drive, follow the instructions in this section *only* if you want to format a primary or extended partition on the hard drive.

If you replaced or added an additional slave drive, follow the instructions in this section to format your replacement hard drive or to format the partition on the hard drive.

## Formatting a primary partition using DOS

Perform this procedure only if you are creating a boot drive and need to format the primary partition in DOS. Format all other partitions in Windows. If you are not sure, use Windows. For instructions, see “Formatting a partition or slave drive using Windows” on page 52.

### Important



The FORMAT program is not available in Windows XP. The primary partition is formatted when Windows XP is installed on the hard drive.



### To format the primary partition on a boot drive:

- 1 Insert the *System Restoration Kit CD* or the *System Restoration CD* into the CD or DVD drive.

### Important



To start from a CD, you may need to make your CD or DVD drive the primary boot device in the BIOS Setup utility. See the documentation that came with your CD to make your CD or DVD the primary boot device.

- 2 Restart your computer. The Main menu opens.
- 3 Close the Main menu.
- 4 Type **format x: /s** where *x* is the letter of the hard drive you have just installed, then press ENTER.

- 5 Select **Y**. Your computer starts formatting. When formatting is complete, the program asks if you want to label the drive.
- 6 If you do not want to label the partition, press **ENTER**.  
- OR -  
If you want to label the partition, type a label name, then press **ENTER**.
- 7 Install the operating system using the operating system CD that came with your computer.
- 8 Right-click the **My Computer** icon (located on the Desktop or the Start menu), then click **Properties**. The *System Properties* dialog box opens.
- 9 In Windows 2000, click the **Hardware** tab, then click **Device Manager**. The *Device Manager* window opens.  
- OR -  
In Windows Me or Windows 98, click the **Device Manager** tab. The *Device Manager* window opens.
- 10 Check for a yellow circle with an exclamation point next to any of your computer's devices. If there are none, you are finished.  
- OR -  
If you find any yellow circles, use the red *Drivers* CD, the *Gateway System Restoration Kit*, or the *Gateway System Restoration CD* that originally came with your computer to reinstall the drivers.

#### Tips & Tricks



If you do not have your original system CDs, go to [www.support.gateway.com](http://www.support.gateway.com) to download any drivers you need.

## Formatting a partition or slave drive using Windows

If an operating system has not been installed on this or another drive, format the primary partition of a boot drive before following this procedure. For instructions, see “Formatting a primary partition using DOS” on page 50.



**To format a partition or slave drive in Windows XP, Windows Me, Windows 2000, Windows 98, or Windows 95:**

- 1** Double-click the **My Computer** icon on your desktop. The *My Computer* window opens.

- OR -

Click **Start**, then click **My Computer**. The *My Computer* window opens.

- 2** Right-click the hard drive you want to format.
- 3** Click **Format**. The *Format Local Disk* window opens.
- 4** Select the drive format options, then click **Start**.



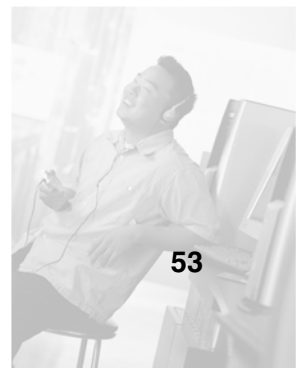


# Troubleshooting

# 7

If your computer does not recognize the new hard drive, try these troubleshooting tips before calling Gateway Technical Support:

- Review the installation procedures. Make sure that you did not skip any of the steps.
- Disconnect, then reconnect the hard drive power cable.
- Disconnect, then reconnect the hard drive data ribbon cable (IDE or SCSI drives) or signal cable (Serial ATA drive). If you are reconnecting a data ribbon cable, make sure that the red-stripe edge is on the right (next to the power cable).
- Replace the hard drive data ribbon cable (IDE or SCSI drives) or signal cable (Serial ATA drive) with the new hard drive cable that was included in the drive kit.



- Make sure that the IDE jumper settings on the back of the drive are set correctly. For more information, see “Setting the IDE jumpers” on page 12.
- Make sure that the SCSI IDs for all SCSI devices have been set correctly. For more information, see “Setting the SCSI jumpers” on page 16.
- Check your BIOS Setup utility to see if your computer supports Logical Block Addressing (LBA). If your computer does not support LBA, the maximum size for the hard drive is 2.1 GB. You may need to contact Gateway Technical Support for information about upgrading your BIOS. If your computer does not support LBA, enter the following drive settings in the BIOS Setup utility:

Cyl.	Heads	Sectors	LZ	Write Precomp
1024	16	63	0	None

- If your new hard drive came with Windows already installed and Windows does not work correctly, use the red *Drivers CD*, the *Gateway System Restoration Kit*, or the *Gateway System Restoration CD* that originally came with your computer to reinstall Windows. Go to “Setting Up the New Drive Automatically” on page 35 and follow the appropriate instructions.



# Safety, Regulatory, and Legal Information

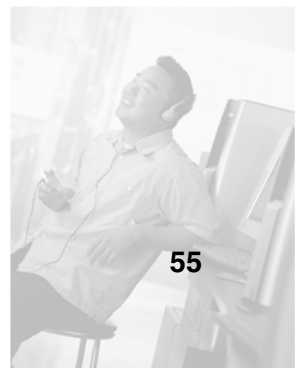
## Regulatory compliance statements

### United States of America

#### Federal Communications Commission (FCC) Unintentional emitter per FCC Part 15

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

# A



This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment to an outlet on a different circuit from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

**Compliance Accessories:** The accessories associated with this equipment are: shielded video cable when an external monitor is connected. These accessories are required to be used in order to ensure compliance with FCC rules.

**Caution**



Changes or modifications not expressly approved by Gateway could void the FCC compliance and negate your authority to operate the product.

## Canada

### Industry Canada (IC)

#### Unintentional emitter per ICES-003

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

## Laser safety statement

All Gateway systems equipped with CD and DVD drives comply with the appropriate safety standards, including IEC 825. The laser devices in these components are classified as "Class 1 Laser Products" under a US Department of Health and Human Services (DHHS) Radiation Performance Standard. Should the unit ever need servicing, contact an authorized service location.

### Warning



Use of controls or adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure. To prevent exposure to laser beams, do not try to open the enclosure of a CD or DVD drive.

## California Proposition 65 Warning

### Warning



This product contains chemicals, including lead, known to the State of California to cause cancer and/or birth defects or reproductive harm.

# Notices

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Poway, CA 92064 USA

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